

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	599	((associative or ph adj dependent) near5 thickener)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:38
2	L2	24	thickener near5 (alkaline or alkali) near5 swell\$3	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:39
3	L3	101	1 and ink	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:46
4	L4	9	2 and ink	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:41
5	L5	36	3 and (fluorinated or fluorocarbon or fluoro\$ or organosilicon\$2 or silicon\$2)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:27
6	L7	2547	thickener same (fluorinated or fluorocarbon or fluoro\$ or organosilicon\$2 or silicon\$2)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:46
7	L6	4	3 and monomer same (fluorinated or fluorocarbon or fluoro\$ or organosilicon\$2 or silicon\$2)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:53
8	L8	18	1 and monomer same (fluorinated or fluorocarbon or fluoro\$ or organosilicon\$2 or silicon\$2)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 12:55
9	L11	350	thickener same (fluoroalkyl or perfluoro\$ or \$fluoro\$ or \$silane or vinyltriethoxysilane)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:16
10	L10	4	3 and monomer same (fluoroalkyl or perfluoro\$ or \$fluoro\$ or \$silane or vinyltriethoxysilane)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:15

	L #	Hits	Search Text	DBs	Time Stamp
11	L12	33	1 and hydrophob\$2 same (fluorinated or fluorocarbon or fluoro\$ or organosilicon\$2 or silicon\$2)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:16
12	L13	12	1 and hydrophob\$2 same (fluoroalkyl or perfluoro\$ or \$fluoro\$ or \$silane or vinyltriethoxysilane)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:18
13	L14	33	11 and ink	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:19
14	L9	191	7 and ink	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:26
15	L15	30945	ink and (writing or marking or ball?point or ballpoint or ball adj point)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:28
16	L16	3796	15 and (acrylic or methacrylic)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:57
17	L17	379	16 and (monomer or hydrophobic) same (fluorinated or fluorocarbon or fluoro\$ or organosilicon\$2 or silicon\$2 or fluoroalkyl or perfluoro\$ or \$silane or vinyltriethoxysilane)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:49
18	L18	254	16 and (monomer or hydrophobic) same (fluorine or halogen or halogenated)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:50
19	L19	6	16 and 1	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:58
20	L20	338	16 and (thickener or thickening adj agent)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 13:59

	L #	Hits	Search Text	DBs	Time Stamp
21	L21	9	16 and (thickener or thickening adj agent) same (acrylic or methacrylic) same (fluorine or silicone or siloxane or halogen or fluorinated)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 14:02
22	L22	26	16 and (thickener or thickening adj agent) same (fluorine or silicone or siloxane or halogen or fluorinated)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 14:06
23	L23	3	16 and (thickener or thickening adj agent) same hydrophobic same hydrophilic	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 14:06
24	L24	385	16 and hydrophobic same hydrophilic	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 14:06
25	L25	23	16 and hydrophobic same (fluorine or silicone or siloxane or halogen or fluorinated or fluoroalkyl or vintltriethoxysilane) and hydrophilic same (acrylic or methacrylic)	USPAT; EPO; JPO; DERWENT ; IBM TDB	2001/11/15 14:07

09/297,399

DERWENT-ACC-NO: 1978-02867A

DERWENT-WEEK: 197802

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TITLE: Waterproof writing ink - prep'd. by adding polymer of perfluoroalkyl gp.-contg. monomer and hydrophilic gp.-contg. monomer to ordinary ink

PATENT-ASSIGNEE: DAIKIN IND LTD[DAIK]

PRIORITY-DATA: 1976JP-0056838 (May 17, 1976)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES
MAIN-IPC			
JP 52139523 A	November 21, 1977	N/A	000
JP 84028234 B	July 11, 1984	N/A	000

INT-CL (IPC): C09D011/16

ABSTRACTED-PUB-NO: JP52139523A

BASIC-ABSTRACT: Ink is obtd. by adding 0.01 - 5 wt. % copolymer prep'd. from 10 - 90 wt. % 3-21C perfluoroalkyl gp.-contg. monomer unit and 90 - 10 wt. % hydrophilic gp.-contg. monomer unit to commercially available writing ink.

This ink has excellent water proofing power just after writing. The addn. of the copolymer does not adversely affect storage quality, yet improves resistance to oil and organic solvents.

The 3-21C perfluoroalkyl gp.-contg. monomers are e.g. of formula RSO₂NR₁R₂OOCR₃=CH₂ or R(CH₂)_nOOCR₃=CH₂ where R is 3-21C perfluoroalkyl, R₁ is H or 1-10C alkyl, R₂ is 1-10C alkylene and R₃ is H or methyl. The hydrophilic

gp.-contg. monomers are e.g. polymerisable carboxylic acids such as (meth)acrylic acid, itaconic acid, maleic acid, etc.; amides thereof; vinyl pyrrolidone; polymerisable sulphonic acids and their amides etc.

Copolymerisable monomers are e.g. styrene, ethylacrylate, vinyl chloride, 2,3-dichloro-1,3-butadiene etc.

DERWENT-CLASS: A97 G02

CPI-CODES: A04-E10; A12-W07D; G02-A04A;